

## State Indicators

# S-45 Business-Performed R&D as a Percentage of Private-Industry Output

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## Description

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This indicator represents the role of R&D in a state's business activity. The business sector is the largest performer of U.S. R&D. The overwhelming majority of business R&D performance is self-funded. A high value for this indicator indicates that the businesses within a state are making a large investment in their R&D activities in that state. Values for this indicator vary greatly across the nation, and business-performed R&D is often concentrated in a handful of states.

The methodology for data collection, assignment to individual states, and developing estimates of R&D funding and performance has changed during the last decade as the transition was made from the National Center for Science and Engineering Statistics' Survey of Industrial R&D to the Business R&D and Innovation Survey. The U.S. total for industrial R&D spending is consistent between these two surveys. Estimates for states with smaller economies are generally less precise than those for states with larger economies.

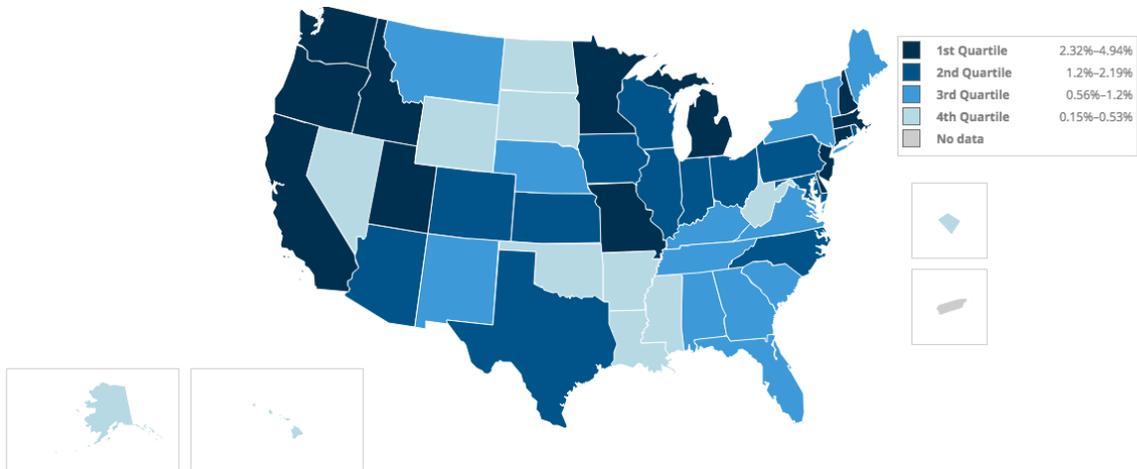
Private-industry output is the portion of state gross domestic product contributed by state businesses. Data for private-industry output come from the Bureau of Economic Analysis.

Data sources: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Industrial Research and Development and Business R&D and Innovation Survey; U.S. Bureau of Economic Analysis, Gross Domestic Product data.

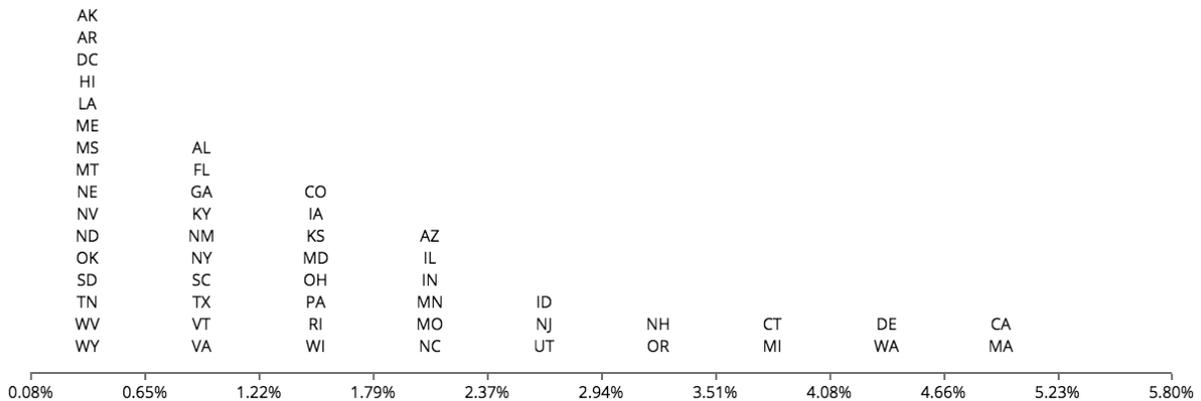
State Indicators

# S-45 Business-Performed R&D as a Percentage of Private-Industry Output

2015



## Distribution of states across indicator values, 2015



Histograms do not display states with extreme values. Please consult the data tables for exact indicator values for each state. State positions on the histogram are based on unrounded values of the indicator and may not always match the rounded values displayed in the table.

## State Indicators

### Business-Performed R&D as a Percentage of Private-Industry Output

(Percent)

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	2.11	2.14	2.19	2.26	2.19	2.04	2.02	1.96	1.99	2.06
Alabama	0.68 i	0.92	0.85	0.82 i	0.88	0.79	0.89	1.00	1.08	1.33
Alaska	0.12 i	0.20 e	0.43 e	0.23 e	0.30	0.22 e	0.14 e	0.12 e	0.10 e	0.13 e
Arizona	1.62	1.44	1.55 i	1.51 i	1.81	2.06	1.56	1.45	1.51	1.66
Arkansas	0.22	0.39 e	0.56	0.66	0.41 e	0.35 e	0.39	0.39	0.34	0.35
California	3.60	3.26	3.48	3.80	3.73	3.39	3.50	3.25	3.27	3.54
Colorado	1.92	2.43	2.27	1.97	1.87	1.68	2.05	2.26	2.24	2.30
Connecticut	2.38	2.50	2.96 i	2.70 i	2.96	3.80	3.54	3.97	4.17	4.15
Delaware	3.30 i	3.99 i	3.42 i	3.57 i	2.81	2.86	2.92	2.22	3.14	2.85
District of Columbia	NA	1.80 i	0.74 e	0.51 e	0.58	0.44	0.50	0.35 e	0.31	0.48
Florida	0.98	0.86	0.85	0.87 i	0.81	0.75	0.60	0.62	0.67	0.62
Georgia	0.60	0.70	0.75	0.80 i	0.68	0.74	0.71	0.68	0.67	0.79
Hawaii	0.29	0.19 e	0.22 e	0.28 e	0.27	0.29	0.34	0.31	0.36	0.31
Idaho	4.72 i	4.17 i	4.23	4.15	2.77	3.01	2.16	1.84	1.60	1.43
Illinois	1.64	1.84	1.94	1.89 i	1.82	1.66	1.75	1.71	1.85	1.93
Indiana	1.72	1.73	1.62 i	1.56 i	1.92	1.85	1.80	1.96	2.09 i	2.13
Iowa	0.78	0.99	0.94	0.91	0.97	0.85	0.89	0.92	0.95	0.93
Kansas	1.75 i	2.02 i	2.03 i	1.77 i	1.69 i	1.81 i	2.03 i	2.13 i	2.22 i	2.12 i
Kentucky	0.40	0.64	0.77	0.77	0.62	0.62	0.55	0.49	0.54	0.65
Louisiana	0.17	0.36 e	0.47 e	0.31 e	0.26 e	0.20 e	0.21	0.21	0.17	0.20
Maine	0.31	0.49	0.70	0.80	0.74	0.72 i	0.55	0.55	0.88	0.61
Maryland	1.12	1.41	1.40	1.44	2.23	2.19	1.71	1.93	1.75	1.54
Massachusetts	3.95	4.68	4.15	4.19	4.43	3.92	3.95	4.02	4.34	4.86

## State Indicators

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Michigan	4.81	4.48	5.58	5.57 i	4.59	4.19	4.56	4.47	4.79	4.72
Minnesota	2.23	2.25	2.36	2.33	2.49	2.46	2.59	2.52	2.90	2.82
Mississippi	0.15	0.36 e	0.42 e	0.44 e	0.39 e	0.39	0.33	0.25	0.29	0.32
Missouri	0.89 i	0.99	1.05	1.19	1.06	0.92	0.97	1.14	1.32	1.31
Montana	0.58	0.37	0.53 e	0.43 e	0.37 e	0.33	0.31	0.30	0.30 i	0.37 i
Nebraska	0.16	0.43 e	0.46 e	0.68 e	0.59	0.65	0.63	0.63	0.64	0.67
Nevada	0.71	0.83	0.77	0.63	0.40	0.44	0.47	0.44	0.36	0.46
New Hampshire	1.92	3.15	3.10	1.78	3.21	2.65	2.95	2.77	2.83	3.35 i
New Jersey	4.02	3.87	3.35	3.24	3.01	3.31	3.13	2.91	3.36	3.53
New Mexico	3.21 i	3.78 i	3.34 i	2.86 i	0.55	0.76	0.71	0.84	0.71	1.13
New York	1.58 i	1.57	1.76	1.58	1.40	1.17	1.07	1.04	1.05	1.00
North Carolina	1.77	1.61	1.62	1.88	1.75	1.42	1.63	1.59	1.67	1.63
North Dakota	0.25	0.33 e	0.66 e	0.55 e	2.18	0.91	1.16	1.94 i	0.50	0.54
Ohio	1.84	1.77	1.94	1.78	1.90	1.70	1.65	1.38	1.43	1.61
Oklahoma	0.64	0.54	0.80 e	0.61	0.67 e	0.50	0.65	0.43	0.40	0.41
Oregon	1.26	1.47	1.52	1.51	2.67	2.23 i	2.69	2.47	2.52	2.37
Pennsylvania	2.08 i	2.21	2.14	2.32	2.36	1.81	1.75	1.86	1.96	2.10
Rhode Island	2.85 i	5.08 i	4.77 i	3.96 i	3.67 i	3.42	3.45 i	3.54 i	3.56 i	3.24 i
South Carolina	0.94 i	1.12	0.98	1.08	0.91	1.00	0.88	0.84	1.16	1.10
South Dakota	0.16	0.23 e	0.31 e	0.45 e	0.42 e	0.23	0.31	0.27	0.25	0.34
Tennessee	0.80	1.67	1.43	1.03	0.91	0.75	0.84	0.85	0.62	0.68
Texas	1.34	1.56	1.43	1.53	1.43	1.55	1.50	1.37	1.41	1.37
Utah	2.14	2.14	1.84	1.78	1.89	1.74	1.48	1.50	1.53	1.39
Vermont	1.82	0.81	2.31	2.43	2.02	1.63 i	1.95	2.17	1.78	1.73
Virginia	0.99	1.32	1.29	1.21	1.26	1.21	1.37	1.48	1.48	1.55
Washington	3.99 i	3.92 i	3.55 i	4.02 i	4.35 i	4.03	4.19	3.84 i	3.84	4.18

## State Indicators

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
West Virginia	NA	0.99	1.00	0.92	0.57	0.70	0.57	0.49	0.55	0.47
Wisconsin	1.23	1.32	1.42	1.49	1.47 i	1.52 e	1.45	1.38	1.36	1.44
Wyoming	0.23	0.16 e	0.49 e	0.25 e	0.18 e	0.13	0.21	0.12	0.13	0.09 e
Puerto Rico	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

e more than 50% of the cell value is imputed due to raking of state data  
i more than 50% of value is imputed due to reasons other than raking of state data  
NA not available

**Note(s):**  
The national total for business-performed R&D in the United States includes undistributed business-performed R&D and states with suppressed data. Please see source for information on estimation techniques; The national private industry output value for the United States does not include territories.

**Source(s):**  
National Science Foundation, National Center for Science and Engineering Statistics, Survey of Industrial Research and Development and Business R&D and Innovation Survey (various years), data as of July 2017; U.S. Bureau of Economic Analysis, Gross Domestic Product data (various years), data as of May 2017.

Recommended Citation: National Science Board. 2018. "Business-Performed R&D as a Percentage of Private-Industry Output." Science and Engineering Indicators 2018, State Indicators. Alexandria, VA: National Science Foundation (NSB-2018-1). <https://www.nsf.gov/statistics/state-indicators/indicator/business-performed-rd-to-private-industry-output>

Last updated: January 18, 2018

*Science and Engineering Indicators 2018*

## State Indicators

### Business-Performed R&D as a Percentage of Private-Industry Output

(Percent)

State	2007	2008	2009	2010	2011	2012	2013	2014	2015
United States	2.14	2.29	2.29	2.18	2.20	2.17	2.23	2.25	2.27
Alabama	1.25	2.17	1.14	1.01	1.27	0.84	0.99	1.22	0.94
Alaska	0.14 e	0.15	0.17	0.17	0.17 e	0.08 e	0.09	0.12 e	0.15 e
Arizona	1.68	2.37	2.26	1.94	2.27	2.19	2.25	2.27	2.19
Arkansas	0.40	0.51	0.84	0.31	0.37	0.32	0.29	0.31	0.29
California	3.75	3.92	3.93	3.82	4.25	4.40	4.59	4.79	4.94
Colorado	2.42	1.80	1.85	1.78	1.89	1.73	1.80	1.70	1.59
Connecticut	4.42	4.91	5.08	3.09	3.58	3.42	3.72	4.16	3.72
Delaware	2.87	NA	4.00	4.19	3.92	4.47	4.23 i	4.25	4.31
District of Columbia	0.62	0.89	1.07	0.36	0.61	0.37	0.67	0.44	0.37
Florida	0.68	0.64	0.69	0.81	0.93	0.79	0.84	0.79	0.75
Georgia	0.76	0.94	1.12	1.03	1.05	1.02	1.02	1.11	1.05
Hawaii	0.42	0.51	0.47	0.49	0.47	0.33	0.37 i	0.33	0.29
Idaho	1.55	2.01	2.22	2.38 i	2.41	2.17	2.36	2.65	2.75
Illinois	1.95	1.55	1.62	2.10	1.98	2.04	2.02	1.84	1.83
Indiana	2.02	2.03	2.23	1.96	2.34	2.23	2.29	2.00	2.07
Iowa	0.98	1.24	1.62	1.57	1.76	1.26	1.43	1.40	1.63
Kansas	1.24	1.46	1.53	1.36	1.29	1.71	1.57	1.52	1.62
Kentucky	0.67	0.70	0.75	0.64	0.88	0.72	0.83	0.73	0.79
Louisiana	0.20 e	0.21	0.22	0.21	0.22	0.17 i	0.17	0.18	0.19 i
Maine	0.63	0.72	1.24	0.57	0.67	0.61	0.80	0.79	0.61
Maryland	1.60	1.85	1.89	1.77	2.00	1.54	1.78	1.85	1.77
Massachusetts	5.80	4.41	4.24	3.94	4.28	4.54	4.43	5.17	4.94

## State Indicators

State	2007	2008	2009	2010	2011	2012	2013	2014	2015
Michigan	4.44	4.09	3.82	3.63	3.90	4.06	4.19	4.31	4.08
Minnesota	2.86	2.43	3.01	2.60	2.44	2.37	2.42	2.45	2.32
Mississippi	0.37	0.31	0.34	0.31	0.30	0.33	0.25	0.31	0.25
Missouri	1.30	NA	NA	3.64 i	NA	3.00 i	2.97 i	2.71 i	2.36 i
Montana	0.44	0.48	0.48	0.45	0.39	0.29 i	0.25	0.53	0.58 i
Nebraska	0.69	0.76	0.80	0.66	0.73	0.65	0.67	0.60	0.58
Nevada	0.48	0.59	0.59	0.67	0.58	0.57	0.46	0.54	0.31
New Hampshire	3.36 i	4.04	NA	3.26	3.62	3.16	3.39	3.26	2.94
New Jersey	4.19	4.38	4.34	3.70	3.20	3.46	2.98	2.86	2.81
New Mexico	0.91	1.10	0.99	0.83	0.69	0.65	0.75	0.68	0.70
New York	1.11	1.17	1.09	1.04	1.12	1.02	1.03	1.12	1.20
North Carolina	2.00	1.75	1.60	1.63	1.70	1.67	2.07	1.98	1.98
North Dakota	0.51	1.06	0.83	0.76	0.70	0.47	0.46	0.50	0.42
Ohio	1.67	1.71	1.63	1.58	1.50	1.60	1.63	1.70	1.68
Oklahoma	0.43	0.45	0.43	0.39	0.44	0.31	0.32	0.36	0.42
Oregon	2.40 i	2.55	2.57	2.61	2.62	2.97 i	3.25	3.60	3.32
Pennsylvania	2.08	1.89	1.96	1.75	1.77	1.63	1.82	1.76	1.63
Rhode Island	1.01	1.34	1.13	1.27	1.29	1.04	1.28	1.18	1.57
South Carolina	1.06	0.91	0.95	0.97	0.99	1.11	0.67	0.68	0.76
South Dakota	0.43	0.41	0.45	0.36	0.37	0.30	0.41	0.34	0.33
Tennessee	0.76	0.74	0.69	0.56	0.62	0.59	0.56	0.60	0.56
Texas	1.32	1.45	1.49	1.31	1.28	1.18	1.13	1.13	1.20
Utah	1.75	1.95	2.16	2.06	2.30	1.94	2.56	2.31	2.52
Vermont	1.94	1.95	1.93	1.38	1.59 i	1.94 i	1.67 i	1.21	0.96
Virginia	1.51	1.90	1.87	1.37	1.61	1.33	1.22	1.34 i	1.14
Washington	4.26	4.58	5.58	4.45	4.62	4.38	4.28	4.30	4.40

## State Indicators

State	2007	2008	2009	2010	2011	2012	2013	2014	2015
West Virginia	0.47	0.64	0.66	0.43	0.41	0.51	0.51	0.45	0.33
Wisconsin	1.58	1.76	1.69	1.77	1.76	1.73	1.70	1.66	1.75
Wyoming	0.12 e	0.17	0.15	0.12 e	0.13 e	0.09 e	0.08 e	0.16	0.53
Puerto Rico	NA	NA	NA	NA	NA	NA	NA	NA	NA

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**Note(s):**  
The national total for business-performed R&D in the United States includes undistributed business-performed R&D and states with suppressed data. Please see source for information on estimation techniques; The national private industry output value for the United States does not include territories.

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## State Indicators

### Business-performed domestic R&D

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	157,539	169,180	184,129	201,962	202,017	193,868	200,724	208,301	226,159	247,669
Alabama	589 i	845	823	821 i	905	846	992	1,227	1,417	1,835
Alaska	24 i	37 e	82 e	48 e	68	51 e	36 e	35 e	32 e	49 e
Arizona	1,854	1,801	2,109 i	2,182 i	2,707	3,201	2,604	2,570	2,980	3,590
Arkansas	118	213 e	326	400	254 e	225 e	270	287	271	285
California	34,011	32,856	38,169	45,455	44,628	42,177	46,401	46,614	50,683	58,424
Colorado	2,248	3,180	3,266	3,143	3,082	2,823	3,543	4,008	4,299	4,657
Connecticut	3,014	3,346	4,145 i	4,132 i	4,686	6,077	5,834	7,177	7,885	8,273
Delaware	1,009 i	1,356 i	1,295 i	1,468 i	1,232	1,219	1,298	1,059	1,511	1,446
District of Columbia	NA	598 i	268 e	196 e	242	194	235	182 e	166	276
Florida	3,442	3,265	3,482	3,773 i	3,755	3,707	3,155	3,486	4,164	4,139
Georgia	1,273	1,617	1,904	2,159 i	1,912	2,107	2,104	2,160	2,282	2,786
Hawaii	87	55 e	68 e	93 e	93	103	133	131	168	155
Idaho	1,181 i	1,103 i	1,239	1,363	884	992	745	681	642	625
Illinois	6,248	7,318	8,102	8,393 i	8,232	7,616	8,319	8,554	9,712	10,765
Indiana	2,677	2,922	2,863 i	2,888 i	3,583	3,572	3,658	4,208	4,610 i	4,858
Iowa	578	750	730	762	817	753	833	963	1,039	1,055
Kansas	1,136 i	1,384 i	1,448 i	1,327 i	1,299 i	1,427 i	1,675 i	1,804 i	1,993 i	2,064 i
Kentucky	359	606	777	762	636	656	601	565	660	839
Louisiana	172	377 e	516 e	364 e	316 e	248 e	289	311	300	367
Maine	83	137	208	255	249	250 i	200	213	350	253
Maryland	1,425	1,905	2,020	2,213	3,682	3,800	3,118	3,826	3,706	3,421
Massachusetts	8,300	10,367	9,781	10,857	11,756	10,609	11,092	11,819	13,342	15,562
Michigan	13,009	12,554	16,877	17,489 i	14,283	13,565	15,217	15,170	16,752	16,477

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State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Minnesota	3,116	3,367	3,695	3,971	4,355	4,460	5,003	5,199	6,340	6,296
Mississippi	73	183 e	224 e	242 e	219 e	224	199	160	194	231
Missouri	1,290 i	1,505	1,664	1,978	1,792	1,592	1,742	2,151	2,602	2,675
Montana	92	63	92 e	78 e	70 e	66	65	70	77 i	103 i
Nebraska	71	195 e	217 e	335 e	306	342	363	383	407	447
Nevada	380	476	490	433	290	339	383	417	382	535
New Hampshire	652	1,138	1,157	722	1,339	1,153	1,349	1,330	1,435	1,774 i
New Jersey	11,069	11,107	10,145	10,580	10,164	11,566	11,405	10,993	13,214	14,606
New Mexico	1,310 i	1,450 i	1,352 i	1,203 i	231	331	338	450	405	676
New York	9,939 i	10,283	12,260	11,622	10,884	9,234	8,528	8,793	9,474	9,518
North Carolina	3,590	3,483	3,754	4,535	4,437	3,704	4,423	4,565	5,158	5,486
North Dakota	33	46 e	95 e	83 e	347	154	216	379 i	104	120
Ohio	5,608	5,742	6,531	6,245	6,694	6,230	6,258	5,516	5,900	6,852
Oklahoma	428	369	562 e	463	543 e	412	576	410	422	474
Oregon	1,102	1,345	1,408	1,533	2,677	2,320 i	2,956	3,057	3,252	3,419
Pennsylvania	6,609 i	7,393	7,474	8,473	8,967	7,064	7,091	8,005	8,846	9,819
Rhode Island	704 i	1,332 i	1,317 i	1,167 i	1,134 i	1,121	1,203 i	1,320 i	1,387 i	1,330 i
South Carolina	783 i	996	922	1,059	921	1,054	976	961	1,402	1,396
South Dakota	26	40 e	57 e	89 e	87 e	53	75	72	68	95
Tennessee	1,089	2,440	2,205	1,644	1,503	1,289	1,507	1,630	1,246	1,428
Texas	7,265	8,984	8,661	10,048	9,839	10,744	11,008	10,992	12,438	13,334
Utah	1,027	1,119	1,028	1,063	1,173	1,116	996	1,089	1,234	1,274
Vermont	246	114	346	389	339	286 i	360	423	360	360
Virginia	1,767	2,540	2,662	2,683	2,957	2,920	3,492	4,006	4,379	4,816
Washington	6,610 i	7,072 i	7,093 i	8,235 i	8,933 i	8,579	9,220	8,840 i	9,736	11,320
West Virginia	NA	335	351	329	211	264	219	202	242	221



## State Indicators

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Wisconsin	1,707	1,929	2,194	2,415	2,469 i	2,649 e	2,623	2,645	2,729	3,020
Wyoming	28	20 e	65 e	37 e	28 e	21	37	23	30	27 e
Puerto Rico	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA not available

*Science and Engineering Indicators 2018*

## State Indicators

### Business-performed domestic R&D

State	2007	2008	2009	2010	2011	2012	2013	2014	2015
United States	269,267	290,681	282,393	278,977	294,093	302,250	322,528	340,728	355,821
Alabama	1,771	3,099	1,562	1,449	1,879	1,284	1,563	1,961	1,561
Alaska	58 e	69	71	74	84 e	39 e	46	57 e	66 e
Arizona	3,846	5,232	4,682	4,054	4,931	4,962	5,208	5,499	5,515
Arkansas	339	443	709	276	344	305	288	317	302
California	64,187	67,532	64,939	64,914	75,035	81,689	89,373	98,488	107,982
Colorado	5,223	4,019	3,960	3,899	4,310	4,105	4,522	4,551	4,362
Connecticut	9,444	10,518	10,638	6,498	7,504	7,343	8,010	9,093	8,533
Delaware	1,472	NA	2,046	2,144	2,097	2,415	2,310 i	2,520	2,681
District of Columbia	379	571	672	235	415	260	488	338	299
Florida	4,569	4,178	4,329	5,127	5,988	5,211	5,795	5,783	5,816
Georgia	2,788	3,344	3,905	3,644	3,839	3,875	4,023	4,635	4,614
Hawaii	218	269	240	257	252	188	214 i	196	186
Idaho	726	961	1,015	1,120 i	1,171	1,079	1,238	1,448	1,554
Illinois	11,362	8,900	9,188	12,221	12,038	13,001	13,096	12,371	12,710
Indiana	4,939	4,991	5,220	4,985	6,158	6,044	6,479	5,901	6,252
Iowa	1,202	1,509	1,943	1,950	2,314	1,763	2,052	2,098	2,539
Kansas	1,304	1,600	1,616	1,492	1,509	2,072	1,942	1,934	2,126
Kentucky	890	933	986	889	1,278	1,074	1,279	1,158	1,292
Louisiana	373 e	411	416	428	459	363 i	354	386	400 i
Maine	265	308	530	251	295	275	365	373	298
Maryland	3,665	4,333	4,492	4,384	5,101	4,028	4,770	5,124	5,136
Massachusetts	19,488	15,028	14,422	14,020	15,722	17,491	17,395	21,105	21,484
Michigan	15,736	13,742	11,999	12,144	13,660	14,912	15,925	17,077	17,136

## State Indicators

State	2007	2008	2009	2010	2011	2012	2013	2014	2015
Minnesota	6,636	5,728	6,880	6,246	6,174	6,216	6,614	6,975	6,820
Mississippi	279	252	260	243	235	273	211	269	216
Missouri	2,736	NA	NA	8,106 i	NA	6,982 i	7,174 i	6,720 i	6,078 i
Montana	134	148	144	145	136	105 i	92	205	225 i
Nebraska	489	561	602	527	636	578	627	590	578
Nevada	567	677	619	709	638	634	525	631	381
New Hampshire	1,814 i	2,169	NA	1,818	2,069	1,857	2,045	2,041	1,932
New Jersey	17,892	19,054	18,404	15,925	13,930	15,810	14,022	13,743	14,113
New Mexico	568	735	623	546	472	445	519	499	502
New York	10,916	11,455	10,919	10,954	12,072	11,732	12,032	13,818	15,329
North Carolina	6,829	6,246	5,531	5,749	6,193	6,254	8,083	8,091	8,572
North Dakota	126	303	231	236	261	222	229	271	211
Ohio	7,265	7,405	6,811	6,857	6,993	7,755	8,118	8,945	9,044
Oklahoma	527	595	509	478	604	463	505	607	661
Oregon	3,629 i	4,074	4,080	4,396	4,631	5,156 i	5,635	6,434	6,357
Pennsylvania	10,387	9,735	9,989	9,246	9,718	9,318	10,761	10,816	10,354
Rhode Island	411	538	460	531	542	450	571	542	751
South Carolina	1,426	1,221	1,254	1,316	1,399	1,615	1,016	1,089	1,289
South Dakota	132	133	143	120	136	112	164	135	139
Tennessee	1,638	1,608	1,487	1,244	1,434	1,437	1,423	1,586	1,570
Texas	13,889	16,166	15,307	14,384	15,309	15,163	15,550	16,373	17,350
Utah	1,764	1,945	2,083	2,066	2,438	2,134	2,945	2,809	3,274
Vermont	413	422	418	313	374 i	466 i	406 i	302	247
Virginia	4,840	6,142	6,159	4,655	5,562	4,756	4,445	4,994 i	4,486
Washington	12,687	13,876	16,471	13,545	14,558	14,494	14,860	15,699	16,940
West Virginia	233	334	349	240	247	305	306	279	201



## State Indicators

State	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wisconsin	3,411	3,798	3,616	3,927	4,053	4,135	4,227	4,287	4,676
Wyoming	37 e	63	47	39 e	46 e	30 e	28 e	59	177
Puerto Rico	NA								

NA not available

*Science and Engineering Indicators 2018*

## State Indicators

### Private-industry output

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	7,459,395	7,894,015	8,403,164	8,956,010	9,223,548	9,499,527	9,950,967	10,627,989	11,366,297	12,045,446
Alabama	87,014	91,506	96,284	99,665	102,978	106,580	111,717	123,016	131,370	137,954
Alaska	20,284	18,776	19,293	21,235	22,642	23,363	25,190	28,041	32,475	36,737
Arizona	114,739	124,648	135,978	144,666	149,576	155,487	166,857	176,749	197,738	216,682
Arkansas	53,067	54,592	58,640	60,283	61,841	64,681	68,691	74,444	78,619	82,415
California	945,830	1,007,437	1,095,761	1,197,217	1,197,983	1,242,701	1,324,365	1,435,602	1,547,616	1,648,709
Colorado	116,955	130,912	144,031	159,704	164,749	167,933	172,577	177,026	191,839	202,661
Connecticut	126,860	134,034	139,870	153,203	158,317	160,017	164,906	180,676	189,030	199,531
Delaware	30,590	34,021	37,840	41,115	43,803	42,604	44,410	47,626	48,090	50,791
District of Columbia	31,039	33,293	36,177	38,328	41,683	44,099	46,550	51,458	54,379	57,131
Florida	350,096	380,003	407,497	435,921	464,976	493,802	522,023	559,840	621,490	663,453
Georgia	212,104	232,254	254,109	270,755	279,945	284,508	296,418	317,876	339,364	353,229
Hawaii	29,877	29,587	30,783	32,851	34,152	35,880	38,638	42,440	46,529	49,272
Idaho	25,039	26,459	29,288	32,860	31,955	32,947	34,453	36,922	40,075	43,705
Illinois	380,212	396,831	417,872	443,600	452,598	460,087	474,994	500,206	525,358	557,784
Indiana	155,693	168,812	176,419	185,720	186,173	193,404	203,129	215,200	220,779	227,797
Iowa	74,243	75,553	78,072	83,700	84,255	88,096	93,917	104,719	109,340	113,324
Kansas	64,971	68,388	71,360	75,017	77,002	78,905	82,637	84,645	89,769	97,240
Kentucky	90,714	95,146	100,272	99,110	102,025	105,590	109,734	116,465	123,023	129,855
Louisiana	103,429	105,045	110,210	116,334	121,188	121,390	135,488	149,551	177,172	185,134
Maine	26,407	27,957	29,914	32,045	33,504	34,874	36,309	38,580	39,699	41,442
Maryland	127,798	135,243	144,380	153,953	164,796	173,471	182,048	197,942	211,789	222,411
Massachusetts	210,292	221,378	235,580	259,313	265,138	270,780	280,984	294,009	307,191	320,527
Michigan	270,221	280,290	302,217	313,960	311,130	323,381	334,010	339,315	349,691	349,411

## State Indicators

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Minnesota	139,820	149,354	156,862	170,718	174,551	181,027	193,071	206,714	218,352	223,448
Mississippi	49,232	51,379	53,576	54,919	55,952	57,062	60,805	64,092	67,318	71,709
Missouri	145,207	151,582	158,286	166,885	169,547	173,557	180,201	189,413	196,868	204,019
Montana	15,900	16,965	17,304	18,127	19,077	19,776	21,202	23,254	25,677	27,670
Nebraska	43,556	45,096	46,791	49,558	51,545	52,949	57,635	61,063	63,590	66,793
Nevada	53,641	57,669	63,969	69,046	72,886	76,669	81,872	94,037	107,131	115,711
New Hampshire	34,006	36,134	37,268	40,497	41,661	43,523	45,668	48,052	50,637	52,919
New Jersey	275,477	287,349	302,519	326,093	337,143	349,709	364,419	377,553	393,234	413,687
New Mexico	40,781	38,349	40,439	42,017	42,336	43,295	47,698	53,394	56,721	59,840
New York	628,841	654,308	697,591	736,293	775,728	786,460	796,400	842,018	902,225	952,896
North Carolina	202,755	216,086	232,195	241,842	253,250	261,745	270,727	287,876	309,301	336,058
North Dakota	13,210	14,149	14,297	15,111	15,935	16,942	18,618	19,496	20,790	22,403
Ohio	304,688	324,913	337,318	350,854	352,647	366,106	378,489	398,663	413,338	424,521
Oklahoma	66,981	68,279	70,437	76,394	81,371	82,347	88,074	95,223	105,086	116,090
Oregon	87,271	91,502	92,799	101,840	100,302	104,109	109,794	123,710	128,988	144,458
Pennsylvania	317,488	334,166	349,452	365,593	380,727	390,004	406,001	429,819	450,599	467,894
Rhode Island	24,715	26,237	27,592	29,478	30,928	32,747	34,832	37,326	38,988	41,039
South Carolina	83,720	88,660	94,122	97,986	101,614	105,528	110,964	114,625	120,400	126,628
South Dakota	16,399	17,435	18,154	19,645	20,595	23,250	24,354	26,283	27,261	28,234
Tennessee	136,307	146,379	154,004	160,047	164,331	170,963	179,890	192,579	199,434	209,871
Texas	543,583	574,968	605,749	657,639	688,309	694,197	732,725	804,860	879,504	971,908
Utah	47,948	52,293	55,874	59,572	62,219	64,221	67,276	72,692	80,561	91,531
Vermont	13,534	14,046	14,991	16,011	16,816	17,542	18,430	19,510	20,220	20,839
Virginia	177,845	192,097	207,017	221,665	235,541	240,665	254,182	270,732	294,983	311,605
Washington	165,613	180,184	199,586	204,940	205,398	212,642	220,178	230,392	253,843	271,064
West Virginia	32,705	33,720	35,255	35,786	36,815	37,730	38,465	40,953	44,311	47,489



## State Indicators

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Wisconsin	138,324	146,045	154,677	162,277	168,018	174,062	181,141	191,454	200,868	209,315
Wyoming	12,374	12,505	13,192	14,624	15,894	16,124	17,813	19,854	23,643	28,613
Puerto Rico	NA									

NA not available

*Science and Engineering Indicators 2018*

## State Indicators

### Private-industry output

State	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
United States	12,572,387	12,716,179	12,352,979	12,826,507	13,348,439	13,957,545	14,468,465	15,115,846	15,698,669	16,177,539
Alabama	141,306	142,965	137,143	142,773	148,181	153,494	158,140	161,397	166,437	170,652
Alaska	40,919	46,889	41,387	44,742	48,851	50,592	49,786	47,890	42,856	40,097
Arizona	228,291	220,965	207,394	208,939	216,784	226,323	231,865	242,091	251,790	262,252
Arkansas	84,525	86,490	84,141	88,416	92,541	94,240	99,255	102,517	103,065	104,843
California	1,709,628	1,724,274	1,651,687	1,700,691	1,764,721	1,857,908	1,945,664	2,057,770	2,186,870	2,284,677
Colorado	216,076	222,854	214,293	219,190	228,268	237,775	251,173	268,173	274,685	283,764
Connecticut	213,430	214,310	209,572	210,094	209,435	214,628	215,582	218,813	229,496	236,275
Delaware	51,356	49,371	51,115	51,200	53,457	54,082	54,566	59,360	62,177	63,473
District of Columbia	61,607	64,217	62,988	65,514	68,369	70,281	72,410	75,958	79,790	83,999
Florida	676,392	652,314	623,370	634,252	641,571	662,438	692,266	728,465	777,049	816,394
Georgia	364,461	357,555	347,858	353,677	364,574	379,083	394,896	417,836	440,120	462,939
Hawaii	51,801	52,462	50,685	52,902	54,023	56,180	58,342	59,906	63,171	66,219
Idaho	46,788	47,817	45,686	47,075	48,595	49,700	52,353	54,671	56,553	58,349
Illinois	581,602	575,434	568,697	580,582	607,066	638,002	647,528	672,180	695,371	715,075
Indiana	244,106	246,022	233,935	253,778	262,873	271,165	282,745	294,483	302,709	310,546
Iowa	122,358	121,676	120,002	124,063	131,125	140,022	143,613	150,267	155,648	158,031
Kansas	105,170	109,821	105,424	109,308	117,172	121,040	123,464	127,134	131,030	132,301
Kentucky	131,988	133,736	131,181	139,146	145,029	149,840	153,888	158,394	164,048	169,252
Louisiana	186,803	194,585	185,440	205,692	208,788	214,241	208,177	216,247	211,936	208,776
Maine	42,331	42,548	42,897	43,832	44,026	45,088	45,778	47,418	49,225	50,958
Maryland	228,739	233,857	237,663	247,315	255,266	262,016	267,854	276,502	289,677	299,709
Massachusetts	336,023	340,418	339,782	355,858	367,400	385,647	392,729	407,896	435,195	454,604
Michigan	354,630	335,734	314,142	334,866	350,459	367,639	380,406	395,830	420,293	435,904

## State Indicators

State	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Minnesota	231,718	235,701	228,869	239,871	252,617	262,584	272,989	285,212	294,056	301,207
Mississippi	75,579	80,300	76,320	78,341	79,446	83,643	85,713	86,074	87,249	88,612
Missouri	210,514	218,476	217,455	222,446	223,850	232,528	241,922	247,543	257,470	265,195
Montana	30,417	31,127	30,082	32,163	34,823	35,838	36,834	38,472	39,098	39,016
Nebraska	71,106	73,512	75,406	79,364	86,929	88,760	93,660	98,170	99,115	100,766
Nevada	118,651	114,088	105,578	106,501	109,285	110,271	112,994	116,985	124,913	130,717
New Hampshire	53,933	53,660	54,410	55,687	57,098	58,798	60,309	62,635	65,610	68,996
New Jersey	426,681	435,232	423,894	430,244	435,801	456,466	470,776	480,697	501,440	518,700
New Mexico	62,320	66,973	62,895	65,636	68,424	68,831	69,565	73,266	71,418	70,893
New York	982,936	975,590	1,005,633	1,055,423	1,079,993	1,149,412	1,172,970	1,231,675	1,281,880	1,321,531
North Carolina	342,233	356,040	346,237	352,214	363,458	374,306	390,702	409,063	432,380	449,203
North Dakota	24,774	28,501	27,979	31,255	37,114	47,330	49,928	54,176	50,196	46,204
Ohio	435,345	432,955	418,771	435,337	464,809	485,024	499,515	525,469	539,483	556,523
Oklahoma	122,704	131,912	117,875	123,145	136,701	147,392	158,556	168,637	159,109	153,512
Oregon	151,091	159,809	158,866	168,730	176,671	173,618	173,185	178,898	191,217	200,733
Pennsylvania	499,084	516,096	508,754	529,402	548,379	570,782	591,126	615,345	637,023	652,966
Rhode Island	40,825	40,009	40,546	41,943	42,094	43,395	44,649	46,098	47,846	49,664
South Carolina	134,426	134,852	132,594	136,225	141,556	145,125	151,712	160,484	170,024	177,361
South Dakota	30,798	32,699	31,943	33,082	37,092	37,944	39,617	40,220	41,688	42,563
Tennessee	214,846	217,840	214,152	220,605	229,998	243,595	252,858	262,617	279,724	291,451
Texas	1,054,733	1,111,304	1,026,595	1,096,537	1,196,807	1,284,997	1,380,764	1,453,506	1,443,878	1,444,146
Utah	100,523	99,756	96,511	100,393	106,039	110,063	115,241	121,791	129,694	136,243
Vermont	21,245	21,684	21,688	22,711	23,530	24,030	24,355	24,980	25,819	26,447
Virginia	320,743	323,217	328,902	339,218	345,947	356,561	364,097	371,748	392,066	402,571
Washington	298,095	302,848	295,053	304,693	314,781	331,273	347,150	365,074	384,606	405,632
West Virginia	49,107	52,373	53,104	56,243	59,749	59,410	60,528	62,507	61,772	61,618



## State Indicators

State	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Wisconsin	215,816	215,328	214,335	221,362	230,712	239,537	249,170	257,506	267,479	274,383
Wyoming	31,813	37,985	32,050	33,832	36,164	34,604	35,097	35,800	33,228	31,596
Puerto Rico	NA									

NA not available

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